This document provides a brief overview of the *FMD Response Plan: The Red Book.* It is intended to be an easy to use reference for responders at all levels. Please see the *FMD Response Plan* for details on any aspect of this guide.

Goals of an FMD Response

There are three goals of an FMD response: To (1) detect, control, and contain FMD in animals as quickly as possible; (2) eradicate FMD using strategies that seek to stabilize animal agriculture, the food supply, and the economy, and to protect public health and the environment; and (3) provide science- and risk-based approaches and systems to facilitate continuity of business for non-infected animals and non-contaminated animal products.

Achieving these three goals will allow individual livestock facilities, States, Tribes, regions, and industries to resume normal production as quickly as possible. They will also allow the United States to regain disease-free status without the response effort causing more disruption and damage than the disease outbreak itself.

Response Strategies

Traditionally, there are five strategies for the control and eradication of FMD in domestic livestock following the detection of an outbreak. These strategies are as follows:

- Stamping-out
- Stamping-out modified with emergency vaccination to kill
- Stamping-out modified with emergency vaccination to slaughter
- Stamping-out modified with emergency vaccination to live
- Emergency vaccination to live without stamping-out.

Factors Influencing FMD Response Strategies

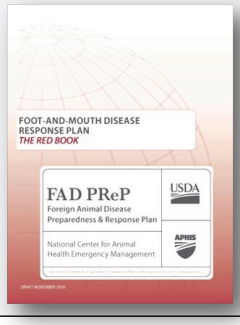
Many factors will be considered when determining whether a particular response strategy would be appropriate and advantageous in responding to an FMD outbreak. No factor will independently dictate a response strategy, or a decision to employ emergency vaccination; there are many factors that will influence the decision of whether and how to vaccinate. Such factors will include

- FMD vaccine availability,
- resources available to implement response strategies,
- population density of susceptible animals,
- origin and location of outbreak,
- distribution and spread of outbreak,
- disruptions to interstate commerce,
- disruptions to international trade,
- acceptance of response strategy or strategies, and
- assessments of control strategies.

Three Epidemiological Principles of Response

There are three key epidemiological principles that will form the foundation of any FMD response effort.

1. Prevent contact between FMD virus and susceptible animals.
2. Stop the production of FMD virus in infected or exposed animals.
3. Increase the disease resistance of susceptible animals to the FMD virus or reduce the shedding of FMD virus in infected or exposed animals.



FMD Emergency Vaccination: Will We Use Vaccine?

As described in the *FMD Response Plan*, the use of emergency vaccination strategies may be considered in an FMD outbreak. An emergency vaccination strategy or strategies can help to achieve the goals of an FMD response effort, based on the three epidemiological principles of response listed above. In order to be effective, an FMD vaccine must be matched to a specific serotype and ideally with the field strain causing the outbreak. There are many challenges to successfully employing an FMD emergency vaccination strategy, but there may also be many benefits. An FMD response may use one or more strategies to control, contain, and ultimately eradicate FMD in domestic livestock. The use of emergency vaccination will be determined by the Unified Command Incident Commander, the State Animal Health Official(s), and the Veterinary Services Deputy Administrator (U.S. Chief Veterinary Officer).

The five response strategies mentioned on the previous page don't always mean the same thing to all stakeholders. To avoid miscommunication, here are the definitions and descriptions of the response strategies that are used in the *FMD Response Plan*.

Stamping-Out

Depopulation of clinically affected and in-contact susceptible animals.

This has been a commonly used approach in past FMD outbreaks which occurred in countries that were previously free of FMD. This strategy is most appropriate if the outbreak is contained to a jurisdictional area or a region in which FMD can be readily contained and further dissemination of the virus is unlikely.

Stamping-Out Modified with Emergency Vaccination to Kill

Depopulation of clinically affected and in-contact susceptible animals and vaccination of at-risk animals, with subsequent depopulation and disposal of vaccinated animals. Depopulation and disposal of vaccinated animals may be delayed until logistically feasible, as determined by Incident Command and the VS Deputy Administrator (U.S. CVO).

This is a suppressive emergency vaccination strategy, where the goal is to suppress virus replication in high-risk animals by using emergency vaccination and then depopulating vaccinates at a later date. This is the targeted vaccination of high-risk susceptible animals.

Stamping-Out Modified with Emergency Vaccination to Slaughter

Depopulation of clinically affected and in-contact susceptible animals and vaccination of at-risk animals, with slaughter and processing of vaccinated animals, if animals are eligible for slaughter under USDA Food Safety and Inspection Service (FSIS) authority and rules and/or State and Tribal authority and rules.

This is a suppressive emergency vaccination strategy, where the goal is to suppress virus replication in high-risk susceptible animals by using emergency vaccination and then slaughtering vaccinates at a later date. This is the targeted vaccination of high-risk susceptible animals.

Stamping-Out Modified with Emergency Vaccination to Live

Depopulation of clinically affected and in-contact susceptible animals and vaccination of at-risk animals, without subsequent depopulation of vaccinated animals. Vaccinated animals intended for breeding, slaughter, or other purposes live out their useful lives.

This is a protective emergency vaccination strategy, where the goal is to protect susceptible animals from infection using emergency vaccination with the deliberate intent to maintain vaccinates for the duration of their usefulness. This is a targeted vaccination of non-infected animals, and may include the vaccination of valuable genetic stock, long-lived production animals, or areas with a high-population density.

Emergency Vaccination to Live Without Stamping-Out

Vaccination used without depopulation of infected animals or subsequent depopulation or slaughter of vaccinated animals.

This is a protective emergency vaccination strategy, where the goal is to protect susceptible animals. This strategy is reserved for an FMD outbreak in which FMD is widely disseminated across the United States.

What Else Will Occur During an FMD Response?

Critical activities and tools must be implemented to execute and support any response strategy. These activities and tools must support a science- and risk-based approach that protects public health, animal health, the environment, and stabilizes animal agriculture and the economy. Some of the critical activities that will be employed are as follows:

- Swift imposition of effective quarantine and movement controls
- Rapid diagnostics and reporting
- Epidemiological investigation and tracing
- Increased surveillance
- Continuity of business measures for non-infected premises and non-contaminated animal products
- Biosecurity measures
- Cleaning and disinfection measures
- Effective and appropriate disposal procedures
- Mass depopulation and euthanasia (as the response strategy indicates)
- Emergency vaccination (as the response strategy indicates).

Coordinated Public Awareness Campaign

Regardless of the response strategy or strategies selected, a public awareness campaign will be coordinated. This will support the response strategy by widely disseminating key communication messages and

- engaging and leveraging Federal, State, Tribal, local, and stakeholder relationships to provide unified public messages for all audiences;
- addressing the issues/concerns relating to food safety, public health, the environment, and animal welfare; and
- addressing issues and concerns related to interstate commerce, continuity of business, and international trade.